PMS16

ECONOMIC BURDEN OF JUVENILE IDIOPATHIC ARTHRITIS IN RUSSIA

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**OBJECTIVES:** To estimate the costs associated with juvenile idiopathic arthritis (JIA) for Russia in 2009. **METHODS:** We used the standard cost of illness (COI) method adopting the viewpoint of the payers (national and regional governments). The data was obtained from the national statistics, registries, expert panel interviews and literature. The costs were calculated for the total population of JIA patients in Russia in 2009. We calculated direct medical costs (based on national reimbursement rates and regional data on drug costs), non-medical costs (social benefits expenditures) and indirect costs –productivity loss due to the necessity of providing care for patients by parents. Indirect costs were assessed using friction costs method. **RESULTS:** The total costs of JIA in Russia in 2009 was 1.175 billion RUR (€28,48 mln), or 76,013 RUR (€1843) per patient per year. The highest per person costs were attributed to patients with systemic JIA – 189,489 RUR (€4594), the lowest - with oligoarticular type of JIA (40,223 RUR (€975)).The costs for handicapped child were 3.9 times higher than for those without disability, mostly because of different social benefits. The direct medical costs accounted for 31,5% of total spending, direct non-medical costs – for 55,6%, and indirect costs – for 12,8%. The share of direct non-medical costs in the overall spending was lower in less severe patients: 58.3% for the systemic JIA, 57.7% for the polyarticular and 46.4% for the oligoarticular type of JIA. Direct nonmedical costs represented 75.8% of total costs for handicapped child versus 42.8% in patient without such status. **CONCLUSIONS:** JIA represents significant social and economic burden for the state. The costs for handicapped child are several times higher than for the one without disability due to social benefits payments.

PMS17

THE SOCIETAL COST FOR RA BEFORE AND AFTER THE INTRODUCTION OF BIOLOGICAL DRUGS- A SWEDISH NATIONAL REGISTER STUDY FOR 1990-2010

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**OBJECTIVES:** To study the total socioeconomic impact of rheumatoid arthritis (RA) in Sweden 1990-2010 and to discuss the changes in costs during this period. The period is deliberately chosen to cover 10 years before and 10 years after the introduction of biological drugs, TNF-alfa inhibitors. **METHODS:** A prevalence based cost of illness study based on data from official statistics. **RESULTS:** The total socioeconomic cost of RA was 4.3 billion Swedish SEK (SEK) in 1990, adjusted to the price level of 2010. This cost was raised to 5.8 billion SEK in 2010. The increase was mainly due to augmented direct costs for pharmaceuticals. During these 20 years, the drug costs increase from 10.4 percent of direct costs, to 75 percent of direct costs in 2010. Of the total costs, drug costs increase from representing 3 to 32 percent. Consequently, the amount of costs that is taken up by indirect costs for RA is lowered from 75 percent in 1990 to 58 percent in 2010. A decline is also seen in the amount of costs that are taken up by costs for care for RA patients. **CONCLUSIONS:** The relation between direct and indirect costs for RA has changed dramatically during the last 20 years with an all rising direct cost for pharmaceuticals. There is a decrease in indirect costs and costs for care which however does not offset the increase in costs for pharmaceuticals.

PMS18

IMPORTANCE OF COI STUDIES IN THE HEALTH CARE-RELATED DECISION-MAKING PROCESS THROUGH THE EXAMPLE OF RHEUMATOID ARTHRITIS

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**OBJECTIVES:** A cost of illness study (COI) evaluates the direct, indirect and intangible costs of a given disease in monetary terms. Depending on perspective, it consists of different elements, and it values identical cost contents in different ways. The social perspective takes account of all cost factors from the point of view. The trends of previous years in Hungary increase the value of COI studies of societal perspective in the health care-related decision-making process. Several methods are available for the evaluation of the chronic diseases' total costs in socially-oriented COI studies. In this analysis, our aim is – through the example of the chronic disease rheumatoid arthritis – to present and compare the results of different COI studies from different data resources, furthermore, to identify the applicability and limits of these studies through the example of rheumatoid arthritis (RA). **METHODS:** The value and ratio of indirect cost of RA in Hungary was estimated in three different approaches: 1. International and national published data from comprehensive review was analyzed in same structure. 2. From 'Top down' estimation's approach the indirect costs of RA was defined from public macro data. 3. From 'Botton up' estimation's approach the indirect costs of RA was defined from survey with questionnaire among RA patients. **RESULTS:** The comparison of the listed resources alongside identical dimensions indicates that the tendencies are similar although there are significant differences in the order of magnitude. **CONCLUSIONS:** Decisions about health care resource allocations affect social welfare. In reimbursement decisions the Hungarian National Health Insurance Fund (NHIF) uses the payor's perspective, but in the ranking and evaluation of health technologies and therapies the societal perspective represents the basis for optimization. COI studies can help in the identification of decision-making focal points, although this necessitates the assessment and standardization of the applicable methodologies.

PMS19

INDIRECT COSTS ASSOCIATED WITH ANKYLOSING SPONDYLITIS IN TURKEY

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**OBJECTIVES:** To describe indirect resource utilization for inpatient ankylosing spondylitis (AS) patients treated in tertiary public health facilities over a 1-year period in Turkey, and demographic factors and disease activity scores associated with indirect costs. **METHODS:** Medical records of 650 prevalent AS patients attending seven centers at tertiary health care institutions nationwide were examined to assess annual indirect health care costs. Eligible patients were age ≥18 and diagnosed with AS for at least 12 months. We assessed relevant indirect cost-related variables and activities, and actual costs. Multivariate regression was used to determine the effects of demographic factors on indirect costs. The Pearson correlation matrix and the association between disease activity scores and indirect costs were assessed. **RESULTS:** Average AS patient age was 40.1± 11.33 standard deviation (SD) years and 35% of patients were female. 55% were employees, of which 59% had employer permission to miss work (average 17 days annually) due to AS, costing patients an average €412 annually due to workday loss as calculated based on income level. 2% of patients had other AS-related consultations not covered by insurance (acupuncture, homeopathic, other), bringing their average annual burden to [a]2,482. 10.46% of AS patients incurred additional AS-related costs (e.g. need for new car, apartment, special equipment), spending an additional [a]1,978 per year. 6.92% of patients required caregivers, costing €546 annually. Multivariate regression showed that age and gender played no significant role related to the increase in indirect costs. Patients needing AS related equipments reported significantly higher Global Disease Activity (GDA), visual analog scale (VAS), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and lower EuroQoL health status (EQ-5D) scores. **CONCLUSIONS:** AS represents a considerable economic burden to Turkey. Studies assessing chronic disease costs, especially in developing nations, are important to determine efficient allocation of the limited resources in such regions.

PMS20

TOTAL HEALTH CARE COSTS ASSOCIATED WITH RHEUMATOID ARTHRITIS INCIDENT CASES IN TURKEY

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**OBJECTIVES:** To estimate risk-adjusted health care costs and identify associated risk factors for rheumatoid arthritis (RA) expenditures in Turkey using real-world data. **METHODS:** This study used research-identified data from a system that processes claims for all Turkish health insurance funds. Incident cases of adult RA patients with two RA visits at least 60 days apart, identified between June 1, 2010 and December 31, 2010, were required to have no RA diagnosis before June 1, 2010, with at least 1 year of continuous enrollment forthe baseline and follow-up years. Pharmacy, outpatient and inpatient claims were compiled over the study period for theselected patients. **RESULTS:** Among 693 patients (mean age: 52.08; female: 80%), 19.6% were age 18-39, 60.9% were 40-64 years and 19.5% were age 65 or older. RA diagnosis was most prevalent in the Marmara region (44%), followed by Central Anatolia (23%), Aegean (16%), and Mediterranean (11%). Nearly 35%of RA patients had at least one cardiovascular, diabetic, respiratory or allergy comorbid condition prior to diagnosis. Most patients were prescribed non-COX inhibitors (79%) and immunosuppressants (43%), and 4% of patients were prescribed disease-modifying anti-rheumatic drugs (DMARDs). The total annual cost ([a]2,000) was comprised of mainly pharmacy (a1,201), followed by outpatient ([a]411), and inpatient costs ([a]361),and an average copay of [a]27. Prior comorbid conditions including diabetes, respiratory disease as well as hospitalization, glucocorticoid and DMARD use significantly contributed to annual health care costs, unlike gender and age. **CONCLUSIONS:** Annual costs of RA patients are significantly lower in Turkey relative to other countries in Europe, yet, pharmaceutical expenditures cover a significant portion of the overall cost. Comparative effectiveness studies are needed to further decrease pharmaceutical expenditures for RA treatment.

PMS21

DETERMINANTS OF TOTAL HEALTH CARE COSTS ASSOCIATED WITH RHEUMATOID ARTHRITIS PREVALENT CASES IN TURKEY

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**OBJECTIVES:** Estimate risk-adjusted health care costs and identify associated risk factors for rheumatoid arthritis (RA) expenditures in Turkey using real-world data. **METHODS:** This study analyzed research-identified data from a system that processes claims for all Turkish health insurance funds. Adult prevalent RA patients with two RA visits at least 60 days apart, identified between June 1, 2010 and December 31, 2010, were required to have an RA diagnosis before June 1, 2010, with at least 1 year of continuous enrollment for the baseline and follow-up years. Pharmacy, outpatient and inpatient claims were compiled over the study period for the selected patients. **RESULTS:** Among 1,920 patients (mean age: 53.91; female: 84%), 13.8% were age 18-39, 66.5% were 40-64 years and 19.7% were age 65 or older.